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## DEPARTMENT OF HIGHWAYS EMPLOYEE'S NEWSLETTER

### DIRECTOR'S MESSAGE

Since the last issue of the Interchange, the Department of Highways has seen nearly all its proposed programs approved by the Legislature and signed by the Governor. These include giving the Highway Commission more powers; reducing the financial districts from 12 down to 5; raising fuel taxes; allowing us to sell bonds to accelerate Interstate construction; and creating the 10 year reconstruction program for our Primaries.

As mentioned before, the approval of these programs and increased federal funding will mean substantial increases in construction activity over the next several years. The following is a summary of the projects we expect to let to contract over the next two federal fiscal years.

In 1984 and 1985, 10 jobs in the Interstate construction program will be let. Of those jobs, 8 will be funded by the Advanced Construction-Interstate (ACI) bonding program for approximately \$59 million. These ACI projects include 14 miles of I-15 near Butte in the Elk Park and Bernice-Basin areas; and the Armstead-Pipe Organ project on I-15 near Dillon. The use of ACI funding will significantly advance the completion of the 74 mile Interstate gap in Montana. The total amount of Interstate construction will be \$70 million.

About 32 Interstate 4R (resurfacing) projects worth \$80 million are scheduled for federal FY's '84 and '85. They include Bozeman-East; Whitehall-Cardwell; Glendive-E&W; and Cascade-Ulm.

In the Primary system about 39 projects are scheduled for '84 and '85. Totalling about \$61 million, they include jobs at Harlowton-N; Shelby-E; and Box Elder to Havre. In addition, about \$40 million over those two years will be dedicated to the Reconstruction Trust Fund (RTF) program. These funds will be allocated by statewide priorities and not under the financial district formula. The money will be used for three purposes—full reconstruction, resurfacing, and pavement preservation. Some RTF jobs are: DeSmet-Evaro; Fairview-SW; and Hungry Horse-Coram.

Secondary projects in 1984 and 1985 total about \$22 million for 21 projects to be let to contract. This includes work at such loca-

tions as Ashland-Otter Creek; Jordan-NW; and Jackson-North.

About \$7 million in Urban system projects are up for letting in '84 and '85. Two of the 9 total projects include Cruse Avenue in Helena, and Leighton Blvd. in Miles City.

All in all, a significant increase in construction activities from a level of contract awards of \$89.5 million in FY 1982 to a projected level of \$143.9 million in FY '85. This represents a major step forward in improving Montana's principal transportation system.

More importantly, the funding at the federal level is expected to continue for at least another 3 years, and at the state level another 10 years. The Program Development Division is already at work selecting projects to recommend to the Highway Commission for fiscal years 1986 and 1987 and beyond.

This means a solid construction program for the Highway Department into the near future, with a stable or growing number of permanent staff. But a strong effort will be made to avoid another "boom and bust" cycle. Instead, we hope to establish a level of employment that is above last year's, but one that can be sustained over a long period of time.

The success the Department has had in getting the program approved is due in large measure to the efforts made by Highway Department employees in responding to the need for changes over the past two years. That response, and the extra help of numerous employees during the legislative session in providing information, is appreciated by this office.

### FHWA CHANGES

Volmer K. (Ken) Jensen, the Administrator for Montana's Divisional office of the Federal Highway Administration, has taken a position in the Baltimore Regional office as Deputy Regional Administrator. Jensen spent two and one-half years here in the Montana job, and will be missed by all who dealt with him.

Roger K. Scott, formerly the Engineering and Operations Administrator in Region Ten's office in Portland, Oregon, is the new Montana Administrator. Scott spent four years in the Portland office before coming to Helena.

### BUY AMERICA

Federal Highway Administrator Ray A. Barnhart announced that FHWA will apply newly enacted "Buy America" requirements to all federally funded highway construction projects. The decision, in the form of an interim rule published in the May 26 *Federal Register*, took effect June 10.

The Surface Transportation Assistance Act of 1982, which provided increased federal highway funding, also included "Buy America" provisions that generally require the use of U.S.-made steel and cement in federally aided highway projects. FHWA had granted a temporary waiver earlier this year for projects costing less than \$450,000, but the new rule eliminates that exemption.

Barnhart said FHWA's action was based on comments the agency had received to date from a wide range of interested parties including members of Congress, state highway officials, and producers of materials and products used in highway construction, such as steel and cement.

"Most of the comments we received recommended that the temporary waiver for projects costing less than \$450,000 either be lowered significantly, or removed entirely," Barnhart said. "Only two comments specifically indicated support of the \$450,000 waiver provision."

He added that, "We have not received any comments or evidence to indicate that this action would present a significant administrative burden or create any other problems. We have deleted the waiver provision in its entirety at this time so that information based on experience with the new requirement can be obtained before the final rule is implemented."

FHWA also announced that the comment period on the new interim rule has been extended until August 1. A final regulation would then be issued by September 30 to cover Federal highway funds for the upcoming fiscal year.

Barnhart also said the Department is conducting a study of the administrative costs involved in processing federally assisted projects under the "Buy America" provisions. The findings of the study will be incorporated into the September 30 final regulation.



**GLEN BROWN, FIELD PROJECT MANAGER, GREAT FALLS DISTRICT** explains construction techniques on the new Ulm bridge to Chao-fu Lin an associate engineer with the Taiwan National Freeway Bureau, and Professor Allan Jackson of Montana State University's Civil Engineering Department. Lin recently toured MDOH projects in Dillon, Ulm, Great Falls and the Kalispell area to study re-decking, recycling, and overlaying. The old Ulm bridge is in the background.

## Who Visits Montana?

Each year the Travel Promotion Bureau conducts surveys to determine Montana's prime markets. These surveys show that men are vacation goers but women are vacation planners. As a result, most of the state's advertising is targeted to women. Women send for the information, clip coupons and dial toll-free numbers.

However, messages to various market areas differ. The Canadian market, for example, is more interested in shopping in Montana. Advertising in Canada, therefore, emphasizes shopping as a benefit of a Montana vacation.

Some of Montana's advertising is done in cooperation with the private sector—ski resorts, airlines—some in cooperation with the National Park Service and some with other states—particularly Wyoming.

Few reliable surveys were conducted on Montana tourism before 1979. However, annual studies since then show that Montana is a popular vacation spot for Washington state residents. Washington ranks first in the number of visitors to Montana, followed by California, Illinois, Minnesota and Colorado.

The average number in a travel party (1981 figures) is 3.2 and the group spends an average of 4.9 days in the state.

These same studies show that friends and relatives influenced the travelers' vacation choice—a major factor in one out of every three Montana tourists' decision.

(Reprinted from Burlington Northern's "Montana Report".)

## Mini Computers in the District Offices

A phased approach is being used to enhance the capabilities of the District mini

computer systems so that the new requirements caused by the reorganization can be met. The first step taken was to expand the enclosures containing the computer hardware to provide enough room to install the new components. The disk storage was increased to provide space for the Maintenance Management System (MMS) and to provide the increased capacity required for the larger district files.

The second step will be to increase the capacity of the Central Processing Unit (CPU) much like placing a bigger engine in a car. The new "engines" will be installed during late June and early July. These CPUs will allow attaching more terminals thus providing the capacity to do more activities simultaneously. Two new terminals, a printer and a new communications feature will also be installed.

During this phase, the operation of the new system will remain nearly the same as it is currently with a few exceptions. Instead of using two terminals concurrently three terminals will be available. The new printers will be much faster than the current ones. Reports which may have taken nearly an hour to print will print in ten to fifteen minutes.

The final step to be taken in early fall will be to install a new set of control programs. These new programs will facilitate the use of the new communications feature which will allow the use of dedicated phone line instead of the old dialup scheme. Having a dedicated line will eliminate the long waits for busy signals, poor quality and unreliability common to dialup lines.

These new programs will also provide the means for a stockman to instantaneously access the statewide inventory files located in Helena. Access to some State Budgeting and Accounting System (SBAS) files will also be possible. In general, anything that is availa-

ble to a terminal user in Helena will also be available to a terminal user at each District.

## HIGHWAY GOLF TOURNAMENT

Duffers take notice. The 13th Annual Western State Highway Golf Tournament will be played at the Kalispell municipal golf course on July 23rd and 24th. Entry fee for men and women, including green fee, is \$25.00.

Beginning at 8:00 a.m. Saturday, 18 qualifying holes will be played with the foursome of your choice. Starting at 8:00 a.m. Sunday, 18 hole medal play will be by flites. The deadline for entries is before tee off on Saturday morning. Entry fee is payable Saturday morning before starting.

Closest to the hole prizes on numbers 12 and 16 on the back 18 holes will be offered Saturday for men and women, and on Sunday for men. Women will play two rounds on the front nine course Sunday, with closest to the hole prize on number three.

A no host buffet will be offered at the club house Saturday evening for \$6.00. The cocktail hour begins at 6:00 p.m.

## BACK TALK

More than 100 DOH employees shared a similar experience during this past year. While performing normal job duties, each one incurred a "BACK INJURY." End results show considerable variation from minor backache to surgical repair with months of recuperation. More than 700 working days were lost from July 14th to December 31st because of back problems. Using an average wage of \$9.63 per hour\*, this represents a cost of more than \$56,000 not including medical costs, compensation premiums, and temporary job replacement. The discomfort and inconvenience to each employee is immeasurable.

The Number One health problem of DOH employees is increasing faster than the national occurrence rates.

What can be done about this alarming situation? Personnel of the Safety & Training Bureau recently attended a National Telecommunication Seminar on Back Injury Prevention and Rehabilitation in Billings. Using guidelines as offered by the nation's leading back authorities, Della Witt, R.N., is currently developing a back program for DOH employees. Emphasis will be on education to prevent back injuries and modification of work activities when necessary to avoid health hazards.

Presentations are planned at all divisions within several months.

\* Average wage of maintenance worker determined by Personnel Division.



## MONTANA ASPHALT CONFERENCE

In April asphalt materials experts from 15 states gathered in Helena to be briefed on the progress and early results of the "Expanded Montana Asphalt Quality Study Using High Pressure Liquid Chromatography (HPLC)." This is a cooperative study which Montana is sponsoring whereby 18 states have agreed to support the current research at Montana State University.

The initial three projects of this series were nationally recognized, as evidenced by the wide support for the current pooled-fund study. States as far away as New Jersey, Pennsylvania, Georgia, Florida, Texas, New Mexico and Alaska are included in the study, in addition to most of the inter-mountain and northern plains states.

This research has established HPLC as a method for determining the quality of asphalt in highway pavements. This is the first chemically related test for asphalt which is fast, accurate and reproducible.

Dr. Wyn Jennings, Mrs. Joan Pribanic and Dr. Steve Koontz of the Department of Chemistry at M.S.U. are the principal investigators.

Robert A. Garber, Manager-Research Section, was the coordinator for the conference.

## PERSONNEL DIVISION GETS NEW BUREAU

The Safety and Training Bureau has been transferred to the Personnel Division. It was formerly assigned to the Centralized Services Division.

A study of the functions and operations of both Personnel and Safety and Training is being done to make the change more effective. Study results will be considered in developing an organization that will best provide service and technical assistance in all three areas. The Consulting Services Bureau, Department of Administration, is doing the research.

The Personnel Division, including the Safety and Training Bureau, will occupy Safety and Training's existing offices on the second floor of the Highway Complex. However the date of the physical move is uncertain. Continue to contact the appropriate staff on matters related to Safety, Training, or Personnel.

## GEOLOGY SECTION HOSTS SEMINAR

The Federal Highway Administration recently sponsored a five day workshop on soils and foundation engineering for the

Core Drilling, Engineering and Geology personnel of the Montana Highway Department. The instructors for the workshop, Dick Cheney and Ron Chassie, demonstrated the importance of good geological, geotechnical and foundation testing and engineering for highway design. The "students" were taken through the various phases of a roadway foundation investigation including subsurface drilling, lab testing of soils, foundation engineering design including pile wave equation analysis and cost effectiveness techniques. Dick Cheney revealed the secret FHWA "Flinging Mud Ball-At-Ceiling" test showing that what sticks to the ceiling does not necessarily stick to the roadway embankment.

On a more serious side, the instructors stressed the importance of communication between the various sections in order to build the best possible highways at least expense to the taxpayers. This workshop should help build better communications as well as eliminate that "bump at the end of the bridge" for the Montana Department of Highways.

## GVW WEIGHT VIOLATIONS

In April, fifteen overweight citations were issued. There were seven citations issued for 10,000 to 15,000 pounds, two issued for weights between 15,000 and 20,000 pounds, and three from 20,000 to 30,000 pounds. Three citations were issued for violations of over 30,000 pounds: Grey Rock Trucking, Transystems, Phillip Greenhagen.

## RETIREMENTS

Employees who have retired recently from the Department with over 30 years of service include: Glen Thompson, 37 years, 11 months; Madison Miner, 37 years, 3 months; Carl Park, 37 years, 2 months; Robert Morgan, 37 years, 1 month; Vernon O'Leary, 36 years, 5 months; Jack Beckert, 36 years, 3 months; Elmer Liebelt, 31 years, 11 months; Albert Fopp, 31 years, 6 months; Harry Becker, 30 years, 11 months; and John McGeever, 30 years, 4 months. Recent retirees with 20-30 years of service include: Jerry Simons, 29 years, 1 month; Clifford Dean, Jr., 27 years, 9 months; John Masonovich, 27 years, 4 months; William Mankin, 27 years, 4 months; Duane McDaniel, 27 years, 2 months; George Allison, 27 years; Fred Holland, 25 years, 8 months; Mike Jovanovich, 23 years, 10 months; and Edna Hess, 21 years, 8 months. Other employees who retired not long ago are Lucille Hurni, 18 years, 1 month; Hugh Douglas, 15 years, 3 months; Malcom Marshall, 14 years, 2 months; Francis Ahern, 12 years, 4 months; Clarence Dedycker, 9 years, 1 month; and Madeline Hoven, 9 years.



**TIRED BUT HAPPY FINISHERS** of the National Transportation Week 10 km race held in Helena recently. Left to right: Bill Dunbar—FHWA, Norm Rognlie—Bridge Bureau, K. C. Yahvah—Hydraulics Unit, Terry Copenhaver—Traffic Unit, Paul Poirier—retired MDOH, Marty Beatty—Project Management Unit, Doug Morgan—Traffic Unit, Cyle Wold—Communications in Kalispell, Jo Anne Eschler—Director's Office, Linda Brandvold—Forest Service, Rich Young—Forest Service, and Dave Cough—FHWA. Cyle Wold was the winner. Top five runners times were submitted for national team competition. They were Wold, Tim Cail—Data Processing, Yahvah, Morgan and Dunbar.

## BID LETTING— A NEVER ENDING JOB

Ever wonder just what goes into getting bids prepared and let to contract? The bid letting process is keeping Jim O'Donnell's Contract Plans Section busier than usual these days with the increased number of projects from the new federal money.

Six or seven projects each month, averaging nearly one million dollars per project, were the norm in bid lettings before the first of the year. Since February, however, the average has been 11 projects let per month at considerably higher project costs.

But let's start at the beginning. First a program for design and construction must be approved, then a set of plans, specifications, and estimates is prepared to describe each job. 225 sets of plans and proposals of approximately 100 pages each are printed and assembled. 30 to 50 sets of these preliminary plans and proposals are distributed to appropriate areas in the Department for review and comment. These documents must be carefully worded since they will constitute a legal contract and errors or omissions could be costly!

After any needed changes are made, corrected pages are reprinted and collated. For each month's letting that's approximately 225,000 pages of documents that must be letter perfect!

Following a tight time schedule, projects are advertised to contractors four weeks before bid opening. Legal advertising is placed in newspapers in every county where projects are located, plus all minority newspapers such as the Flathead Agency's "Char-Koosta". A mailing list of over 800 contractors, subcontractors, suppliers, and other interested parties in the construction industry also receive the Invitation for Bids.

Interested contractors then request a set of plans on which to base their bid. An average of about six contractors will submit sealed bids on each project.

Bid openings are conducted in the Department of Highways auditorium in Helena, usually the last Thursday of each month. As expectant contractors observe, Jim O'Donnell and his staff open the bids, arrange them from lowest to highest, and then read them aloud along with the engineers' estimated cost for each project.

The apparent low bidders as read, however, are not immediately awarded with contracts. A detailed page by page examination of the three lowest bids on each project must be made. This may take one to two days. The documents are checked to make sure all cost items, names, signatures, dates, and seals are correct. Quantity sheets must have unit prices written in words and numbers that match, and the extensions of item quantities for total prices must be accurate. Minority

Business Enterprise participation levels set for each project must also be met. All irregularities are noted and investigated.

Low bids are also compared to the engineer's estimated cost. If a bid exceeds the estimated cost by 10% on a project over \$200,000—by 15% on a \$100,000 to \$200,000 project—or by 20% on a project less than \$100,000, it may be recommended for rejection.

On fully state funded projects, a Montana contractor whose bid is within 3% of a non-resident low bidder will receive preference over the non-resident contractor. The 3% in-state preference does not apply to federal-aid projects.

The Contract Plans Section does not award the bids; that is the duty of the Montana Highway Commission. A comparison sheet of the three lowest bidders on each project and recommendations for awarding, rejecting, or requiring further review of the bid, are submitted to the Commission at their regular monthly meeting. The Commission votes on the awarding of bids, keeping in mind the reasonableness of the bids and any unusual conditions. The Montana Highway Commission is responsible for representing the interests of the general public to get the best job for the minimum price.

In most cases the contract is awarded to the apparent low bidder as read at the bid opening. In some cases the contract may be awarded to the next lowest bidder, or the contract may not be awarded at all. If the Commission votes not to award the contract, the project may be re-advertised for a future bid letting. With the awarding of contracts, construction normally begins within a short time.

The bid letting process goes on, however. At any one time the Contract Plans Section is working on projects of a four month letting schedule.

## Word Processing Systems

Word processing systems will be installed in the District offices this summer. The aging systems in Helena will be replaced with systems identical to those in the Districts. Savings due to lower monthly maintenance costs on the new Helena systems will amount to nearly \$5,000 annually. Having a single equipment type will provide greater flexibility in shifting workloads and will eliminate the requirement to cross-train because of equipment types. The new systems will provide the means to electronically distribute documents. A draft document could be prepared in Helena and distributed to a District for finalization or vice versa when dictated by heavy workloads, vacations or illness. The new systems will have a dictionary to check for spelling errors; a math pack to assist in preparing and verifying reports with numbers. These systems will greatly improve the office efficiency.

## SOCCER ANYONE?

Ace Hoang of the Location and Road Design Section has organized and is helping coach a soccer program for MDOH employees and family members over eight. The objective is to have fun along with physical workouts. It costs nothing to join the program, and soccer balls are furnished by the Highway Employees Benefit Association. The first session of training and practice games ran from April 27 to June 15. The next session will run from July 6 to the week of the Annual Highway Picnic. The practice sessions are held on Wednesdays from 5:30 until dark at the field next to the Lewis & Clark Fairgrounds. Players and volunteer coaches, referees, and timekeepers are welcome.

## PAVEMENT MANAGEMENT SYSTEM

The Pavement Management Section began operations this spring with a flurry of activity. Six people were hired, trained, and are visually rating the condition of pavements on the Interstate and Primary systems. A Mays Ride Meter was purchased, tested, and is being used to compute ride scores on the visually rated routes. California Pavement Management computer programs have been acquired, modified, and are processing the visual ratings and ride scores.

Visual condition rating of the Interstate system has been completed with the Ride Meter survey not far behind. Over 500 miles of Primary highways have also been rated, with emphasis on routes which will be subjected to heavy tourist traffic this summer.

In the meantime, several personnel changes were made. John Wright assumed the duties of Section Supervisor replacing Buck Harris, who became Planning and Statistics Bureau Chief. Dave Routzahn was hired as Research Specialist to replace Don Fiske, who now supervises the Construction Management Program.

## LETTERS

A recent letter to the Director had this to say:

"In our travels through-out the U.S.A. Montana has always had the most un-clean, unkept restrooms of any state. We stopped at m.m. 380 near Grey Cliff last week & found the restrooms there extremely clean! It was a pleasure to see this after all these years. Who ever is responsible—Thank You So Much! I hope the same care & cleanliness is being applied to the rest areas through out our beautiful state.

Thank You  
Lyn Kober Billings, MT

800 copies of this newsletter were produced at a cost of \$ 15 each  
Les Benedict, Information Officer, Editor

Montana State Library



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